

9/10/2003

Amendments to the Claims

1. (previously amended) A compound comprising a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound.

2. (original) A compound according to claim 1, wherein the substituents are independently selected from:

(i) R-, RO-, RS-, and RR'N-

wherein R and R' are independently: a straight or branched chain alkyl group, alkenyl group, or alkynyl group having 1-10 carbon atoms; an aryl group; or an aromatic or non-aromatic heterocyclic group; and

(ii) a group in which the adjacent substituents together form a cyclic group, the cyclic group containing, in addition to the two carbon atoms of the arylene unit to which it is attached, 1-10 carbon atoms and 0 or 1-6 hetero atoms selected from O, S and N.

3. (original) A compound according to claim 2, wherein the cyclic group contains 2-6 hetero atoms.

4. (previously amended) A compound according to claim 1, wherein one or both of the adjacent substituents are independently selected from a branched alkyl group and a branched alkoxy group.

5. (previously amended) A compound according to claim 1, wherein each of the carbon atoms at the adjacent substituted positions of the aryl unit is attached to its substituent via a hetero atom, selected from O, S or N.

6. (previously amended) A compound according to claim 1, wherein the substituents are solubilising substituents.

7. (previously amended) A compound according to claim 1, wherein one or both of the adjacent substituents are independently selected from butyloxy, ethylhexyloxy and 3',7'-dimethyloctyloxy groups.

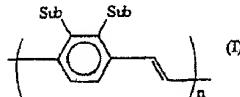
8. Canceled

9. (previously amended) A compound according to claim 1, wherein the poly(arylene vinylene) is a co-polymer comprising a fluorescent unit carrying a distyryl-2,3-substituted-benzene fragment.

10. Canceled

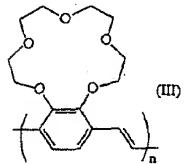
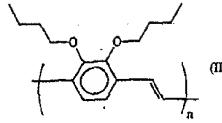
11. (previously amended) A compound according to claim 1, wherein the adjacent substituents are in the 2-position and the 3-position of the phenylene residue.

12. (previously amended) A compound according to claim 11, of formula (I):



wherein Sub is a substituent as defined in claim 1, the vinylene unit may be a trans vinylene unit or a cis vinylene unit, and n is the number of units of the formula in the polymer.

13. (original) A compound according to claim 11, of formula (II) or formula (III):



wherein the vinylene unit may be a trans vinylene unit or a cis vinylene unit, and n is the number of units of the respective formula in the polymer.

14. (previously amended) A method for the production of a compound as defined in claim 1, which method comprises polymerising a bis(halomethyl) substituted phenyl monomer in the presence of a base to form a poly(arylene vinylene), wherein the phenyl monomer has adjacent substituents on the phenyl residue.

15. (original) A method according to claim 14, wherein the monomer is a bis(chloromethyl), bis(bromomethyl) or bis(iodomethyl) monomer.

16. (previously amended). A method according to claim 14, wherein the bas is potassium tertiary butoxide.

17. (previously amended) A component or device comprising a compound as defined in claim 1.

18. (previously amended) A component or device according to claim 17, further comprising an electric, electronic, optical or optoelectronic component or device.

19. (previously amended) A component or device according to claim 17, further comprising a photoluminescent or electroluminescent component or device.

20. (previously amended) A light emitting diode comprising a component or device as defined in claim 17.

21. (previously amended) A method for producing a component or device, which method comprises coating a solution of a compound as defined in claim 1 onto a substrate to form a film.

22. (original) A method according to claim 21, wherein the substrate is ITO.

23. (previously amended) A method according to claim 21, wherein the solution is a chloroform solution.

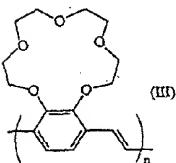
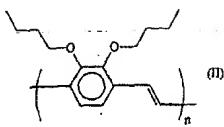
24. (previously amended) A method according to claim 21, wherein the solution is spin-coated onto the substrate.

25-29. Canceled

30. (original) A light emitting diode having a coating of a compound according to claim 1.

31. (previously amended) An electric, electronic, optical or optoelectronic component or device having a coating comprising a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having a 1,4-phenylene vinylene unit with adjacent substituents which produces blue-shifted electroluminescence or photoluminescence.

32. (previously added) A compound comprising a soluble, film-forming conjugated poly(phenylene vinylene) compound having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound, wherein the adjacent substituents are in the 2-position and the 3-position of the phenylene residue, wherein the compound is of formula (II) or formula (III):



wherein the vinylene unit may be a trans vinylene unit or a cis vinylene unit, and n is the number of units of the respective formula in the polymer.

33. (new) A compound comprising a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having solubilising groups so as to render the conjugated poly(1,4-arylene vinylene) compound soluble and having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound.

34. (new) An electric, electronic, optical or optoelectronic component or device having a coating comprising a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having solubilising groups so as to render the conjugated poly(1,4-arylene vinylene) compound soluble and having a 1,4-phenylene vinylene unit with

adjacent substituents which produces blue-shifted electroluminescence or photoluminescence.

35. (new) A compound comprising a film-forming conjugated poly(1,4-arylene vinylene) compound, said poly(1,4-arylene vinylene) compound being soluble in organic solvents and having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound.

36. (new) An electric, electronic, optical or optoelectronic component or device having a coating comprising a film-forming conjugated poly(1,4-arylene vinylene) compound, said poly(1,4-arylene vinylene) compound being soluble in organic solvents and having a 1,4-phenylene vinylene unit with adjacent substituents which produces blue-shifted electroluminescence or photoluminescence.

37. (new) A process for directly obtaining a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound, said process comprising a step of

dehydrohalogenation condensation polymerisation comprising subjecting a solution comprising 2,3 disubstituted bishalomethylbenzene monomers to polymerisation with at least two equivalents of base.

38. (new) A compound comprising a soluble, film-forming conjugated poly(1,4-arylene vinylene) compound having solubilising groups so as to render the conjugated poly(1,4-arylene vinylene) compound soluble in organic solvents, the compound having a 1,4-phenylene vinylene unit with adjacent substituents, said substituents being oriented such as to affect the electronic structure of the compound sufficiently to cause a blue-shift in the photoluminescence and/or electroluminescence of the compound.

39. (new) An electric, electronic, optical or optoelectronic component or device having a coating comprising a film-forming conjugated poly(1,4-arylene vinylene) compound having solubilising groups so as to render the conjugated poly(1,4-arylene vinylene) compound soluble in organic solvents and having a 1,4-phenylene vinylene unit with adjacent substituents which produces blue-shifted electroluminescence or photoluminescence.